170199

# SEARCH REQUEST FORM   Scientific and Technical Information Center - EIC2800
Rev. 3/15/2004    This is an experimental format -- Please give suggestions or comments to Jeff Harrison, JEF-4B68, 272-2511.

Date 10/3/05   Serial # 10/797647   Priority Application Date _____

Your Name M. Lewis   Examiner # _____

AU 2892   Phone 292-1838   Room 3A30

In what format would you like your results? Paper is the default.   (PAPER)   DISK   EMAIL

If submitting more than one search, please prioritize in order of need.   Need before 11/7

The EIC searcher normally will contact you before beginning a prior art search. If you would like to sit with a searcher for an interactive search, please notify one of the searchers.

Where have you searched so far on this case?

Circle:        USPT        DWPI        EPO Abs        JPO Abs        IBM TDB

Other:_____

What relevant art have you found so far? Please attach pertinent citations or Information Disclosure Statements. _____

What types of references would you like? Please checkmark:
Primary Refs ___✓___        Nonpatent Literature ___        Other _____
Secondary Refs ___✓___        Foreign Patents _____        _____
Teaching Refs ___

What is the topic, such as the **novelty**, motivation, utility, or other specific facets defining the desired **focus** of this search?   Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 16 & 22

Problem: See Paragraphs 5-7
Solution: "    "        8-14

BGA Package

Staff Use Only
Searcher: Michael Oliver
Searcher Phone: 571-272-8663
Searcher Location: STIC-EIC2800, 1UP-4B6V
Date Searcher Picked Up: 11/3/05
Date Completed: 11/4/05
Searcher Prep/Rev Time: 523
Online Time: 93

Type of Search
Numerals (#): _____
Bibliographic ✓
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors
WWW _____
Dialog ✓
Questel/Orbit _____
Lexis-Nexis _____
WWW/Internet _____
Other _____

## [File 2] INSPEC 1898-2005/Oct W5

| Set | Items | Description |
|-----|-------|-------------|
| S1 | 3719 | S BGA? ? OR BALL()GRID()ARRAY??? |
| S2 | 377026 | S NOIS??? OR CROSSTALK???? OR DISTORTION |
| S3 | 132 | S S1 AND S2 |
| S4 | 80704 | S (THERMAL??? OR HEAT??? OR TEMPERATURE? ?)(3N)CONDUCT????? |
| S5 | 5 | S S3 AND S4 |
| S6 | 10 | S S3 AND SEMICONDUCTOR? |
| S7 | 125 | S S3 AND PACKAG???? |
| S8 | 120 | S S7 AND PY<=2004 |
| S9 | 10 | S S6 NOT S5 |

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[File 2] INSPEC 1898-2005/Oct W4
[File 34] SciSearch(R) Cited Ref Sci 1990-2005/Oct W5
[File 434] SciSearch(R) Cited Ref Sci 1974-1989/Dec
[File 94] JICST-EPlus 1985-2005/Aug W4
[File 99] Wilson Appl. Sci & Tech Abs 1983-2005/Oct
[File 344] Chinese Patents Abs Aug 1985-2005/May
[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)
[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570
[File 371] French Patents 1961-2002/BOPI 200209
[File 23] CSA Technology Research Database 1963-2005/Oct
[File 95] TEME-Technology & Management 1989-2005/Sep W4
[File 68] Solid State & Superconductivity Abstracts 1966-2005/Oct
[File 60] ANTE: Abstracts in New Tech & Engineer 1966-2005/Oct
[File 293] Engineered Materials Abstracts 1966-2005/Oct

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Set      Items     Description
S1       121638    S (WRAP???? OR PACKET???? OR PACKAG????)(3N)(SUBSTRATE? ? OR MATERIAL? ? OR
SUBSTANCE? ? OR STRATUM OR SUPPORT OR SEMICONDUCTOR? ?)

S2       176817    S (DIELECTRIC? ? OR NONCONDUCT???? OR NON()CONDUCT????)(3N)(FILM??? OR COAT????
OR COVER???? OR SHEET???? OR LAMINA???? OR LAYER???)

S3       152987    S (ELECTRICAL??? OR CONDUCT?????)(3N)(LINE? ? OR PATH? ? OR TRACE? ? OR VIA? ? OR
PATHWAY? ? OR PATH()WAY? ? OR CHANNEL???? OR PASSAGE? ?)

S4       447130    S (CONDUCT???? OR ELECTRICAL??)(3N)(FILM??? OR COAT???? OR COVER???? OR
SHEET???? OR LAMINA???? OR LAYER????)

S5       15190     S ISOLAT???(3N)(SLOT? ? OR APERTURE? ? OR CAVIT???? OR GAP? ? OR SPACE? ? OR
OPEN????? OR HOLE? ? OR PORT? ?)

S6       9233485   S SEGMENT????? OR PART? ? OR AREA? ? OR SECTOR????

S7       51573     S HIGH()FREQUENC????(3N)(NOISE? ? OR TRANSIENT? ? OR SIGNAL? ? OR SPIKE? ? OR
DISTURBANCE? ? OR CLATTER???? OR ACOUSTIC? ? OR AMPLITUDE? ? OR DISTORT????)

S8       547291    S (STRUCTUR??? OR MATERIAL??? OR PHYSICAL OR MECHANICAL)(3N)(INTEGRITY OR
STIFFNESS OR STRENGTH OR RIGID???? OR FIRM??? OR NEWTON? ?()PER()(METER? ? OR METRE? ?))

S9       406017    S (THERMAL??? OR HEAT??? OR TEMPERATURE? ?)(3N)CONDUCT????
S10      502675    S (VOLTAGE? ? OR POWER OR ENERGY OR GROUND)(3N)SOURCE? ?

S11      99466     S IC=(H01L-023/495 OR H01L-023/52 OR H01L-021/44 OR H01L-021/48 OR H01L-021/50 OR
H01L-023/02 OR H01L-023/04 OR H01L-023/10 OR H01L-023/12 OR H01L-023/48)

S12      31204     S MC=(U11-D03B OR U11-D01A3 OR U11-D01A4 OR U11-D03B2 OR U11-D01A5 OR U11-D03A)

S13      19504     S BGA? ? OR BALL()GRID()ARRAY? ? OR FBGA? ? OR FINE()PITCH()BALL()GRID()ARRAY? ?
OR EFBGA? ? OR EXTRA()FINE()PITCH()BALL()GRID()ARRAY? ?

S14      1         S SEGMENT????(3N)(VOLTAGE()PLANE? ?)
S15      0         S S1 AND S13 AND S2 AND S3 AND S4 AND S5
S16      0         S S1 AND S13 AND S7 AND S8 AND S9
S17      18        S S1 AND S13 AND S7
S18      0         S S17 AND S8
S19      0         S S17 AND S9
S20      0         S S17 AND S5
S21      8         S S17 AND S11
S22      5         S S17 AND S12
S23      23        S S1 AND S13 AND S2 AND S3
S24      0         S S23 AND S7
S25      1         S S23 AND S8
S26      3         S S23 AND S9
S27      17        S S23 AND S11
S28      14        S S23 AND S12
S29      0         S S27 AND S5
S30      2         S S27 AND S6
S31      3         S S28 AND S6
S32      15        S S13 AND S1 AND S10
S33      0         S S32 AND S5
S34      7         S S32 AND S11
S35      4         S S32 AND S12
S36      100       S S1 AND S13 AND S8
S37      0         S S36 AND S7
S38      3         S S36 AND S9
S39      36        S S36 AND S11
S40      22        S S39 AND S12
S41      0         S S40 AND S10
S42      2         S S40 AND S2
S43      0         S S40 AND S5
S44      1         S S22 NOT S21
S45      1         S S25 NOT (S21 OR S22)
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S46     3   S S26 NOT (S21 OR S22 OR S25)
S47     1   S S30 NOT (S21 OR S22 OR S25 OR S26)
S48     2   S S31 NOT (S21 OR S22 OR S25 OR S26 OR S30)
S49     6   S S34 NOT (S21 OR S22 OR S25 OR S26 OR S30 OR S31)
S50     2   S S35 NOT (S21 OR S22 OR S25 OR S26 OR S30 OR S31 OR S34)
S51     3   S S38 NOT (S21 OR S22 OR S25 OR S26 OR S30 OR S31 OR S34 OR S35)
S52     1   S S42 NOT (S21 OR S22 OR S25 OR S26 OR S30 OR S31 OR S34 OR S35 OR S38)
```

11/4/2005 11:40:25 AM

**[File 342] Derwent Patents Citation Indx 1978-05/200569**

s pn=**us 6268650**

**S1**          1     S PN=US 6268650

**map pn/ct=**

SearchSave "SC117" stored
1 Select Statement, 1 Search Term(s)
SearchSave SC117

1 SearchSave(s), 1 Search Term(s)


**map pn**

SearchSave "SC118" stored
3 Select Statements, 22 Search Term(s)
SearchSave SC118

1 SearchSave(s), 22 Search Term(s)


**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**


**Set      Items     Description**
**S1**          8     S1:S2

11/4/2005 11:40:25 AM

**[File 342] Derwent Patents Citation Indx 1978-05/200569**

pn=**us 6300165**

S1          1    S PN=US 6300165

**map pn/ct=**

SearchSave "SC119" stored
1 Select Statement, 7 Search Term(s)
SearchSave SC119

1 SearchSave(s), 7 Search Term(s)


**map pn**

SearchSave "SC120" stored
6 Select Statements, 57 Search Term(s)
SearchSave SC120

1 SearchSave(s), 57 Search Term(s)

**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**


| Set | Items | Description |
|-----|-------|-------------|
| **S1** | 22 | S1:S5 FROM 344, 347, 350 |
| **S2** | 7 | S S1 AND (BGA? ? OR BALL()GRID()ARRAY) |

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**[File 342] Derwent Patents Citation Indx 1978-05/200569**

s pn=**us 5895967**

**S1**          1    S PN=US 5895967

**map pn/ct=**

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1 Select Statement, 1 Search Term(s)
SearchSave SC121

1 SearchSave(s), 1 Search Term(s)

**map pn**
Processing MAP

SearchSave "SC122" stored
7 Select Statements, 68 Search Term(s)
SearchSave SC122

1 SearchSave(s), 68 Search Term(s)

**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**

| Set | Items | Description |
|-----|-------|-------------|
| **S1** | 35 | S1:S6 FROM 344, 347, 350 |
| **S2** | 16 | S S1 AND (BGA? ? OR BALL(·)GRID()ARRAY? ?) |
| **S3** | 1 | S S2 AND DIELECTRIC??? |
| **S4** | 14 | S S2 AND PACKAG???? |
| **S5** | 0 | S S4 AND SLOT? ? |
| **S6** | 4 | S S4 AND (STIFFNESS OR THERMAL()CONDUCTIVI????? OR NOISE? ?) |

11/4/2005 1:51:57 PM

**[File 342] Derwent Patents Citation Indx 1978-05/200569**

s pn=**us 6534861**

**S1**          1     S PN=US 6534861

**map pn/ct=**          .

SearchSave "SC123" stored
1 Select Statement, 7 Search Term(s)
SearchSave SC123

1 SearchSave(s), 7 Search Term(s)


**map pn**

SearchSave "SC124" stored
6 Select Statements, 57 Search Term(s)
SearchSave SC124

1 SearchSave(s), 57 Search Term(s)


**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**


**Set       Items    Description**
**S1**        22     S1:S5
**S2**.        7     S S1 AND (BGA? ? OR BALL()GRID()ARRAY? ?)

11/4/2005 11:40:25 AM

**[File 342] Derwent Patents Citation Indx 1978-05/200569**

s pn=**us 6268650**

**S1**          1     S  PN=US 6268650

**map pn/ct=**

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1 Select Statement, 1 Search Term(s)
SearchSave SC117

1 SearchSave(s), 1 Search Term(s)


**map pn**

SearchSave "SC118" stored
3 Select Statements, 22 Search Term(s)
SearchSave SC118

1 SearchSave(s), 22 Search Term(s)


**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**


**Set       Items     Description**
**S1**           8     S1:S2

11/4/2005 11:40:25 AM

**[File 342] Derwent Patents Citation Indx 1978-05/200569**


pn=**us 6300165**

**S1**         1     S PN=US 6300165

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1 Select Statement, 7 Search Term(s)
SearchSave SC119

1 SearchSave(s), 7 Search Term(s)


**map pn**

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6 Select Statements, 57 Search Term(s)
SearchSave SC120

1 SearchSave(s), 57 Search Term(s)


**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**


| Set | Items | Description |
|-----|-------|-------------|
| **S1** | 22 | S1:S5 FROM 344, 347, 350 |
| **S2** | 7 | S S1 AND (BGA? ? OR BALL()GRID()ARRAY) |

11/4/2005 1:51:57 PM

**[File 342] Derwent Patents Citation Indx 1978-05/200569**

s pn=**us 5895967**

**S1**        1    S.PN=US 5895967

**map pn/ct=**

SearchSave "SC121" stored
1 Select Statement, 1 Search Term(s)
SearchSave SC121

1 SearchSave(s), 1 Search Term(s)

**map pn**
Processing MAP

SearchSave "SC122" stored
7 Select Statements, 68 Search Term(s)
SearchSave SC122

1 SearchSave(s), 68 Search Term(s)

**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**

| Set | Items | Description |
|-----|-------|-------------|
| **S1** | 35 | S1:S6 FROM 344, 347, 350 |
| **S2** | 16 | S S1 AND (BGA? ? OR BALL()GRID()ARRAY? ?) |
| **S3** | 1 | S S2 AND DIELECTRIC??? |
| **S4** | 14 | S S2 AND PACKAG???? |
| **S5** | 0 | S S4 AND SLOT? ? |
| **S6** | 4 | S S4 AND (STIFFNESS OR THERMAL()CONDUCTIVI????? OR NOISE? ?) |

11/4/2005 1:51:57 PM

**[File 342] Derwent Patents Citation Indx 1978-05/200569**

s pn=**us 6534861**

**S1**          1     S PN=US 6534861

**map pn/ct=**

SearchSave "SC123" stored
1 Select Statement, 7 Search Term(s)
SearchSave SC123

1 SearchSave(s), 7 Search Term(s)


**map pn**

SearchSave "SC124" stored
6 Select Statements, 57 Search Term(s)
SearchSave SC124

1 SearchSave(s), 57 Search Term(s)


**[File 344] Chinese Patents Abs Aug 1985-2005/May**
**[File 347] JAPIO Nov 1976-2005/Jul(Updated 051102)**
**[File 350] Derwent WPIX 1963-2005/UD,UM &UP=200570**


**Set        Items    Description**
**S1**          22     S1:S5
**S2**           7     S S1 AND (BGA? ? OR BALL()GRID()ARRAY? ?)